

AMENDMENT TO CLAIMS

IN THE CLAIMS:

1. (Currently amended) A method of detecting an inorganic phosphoric acid which comprises:

subjecting a sample to a measurement system including glyceraldehyde-3-phosphate, oxidized nicotinamide adenine dinucleotide or oxidized nicotinamide adenine dinucleotide phosphate, glyceraldehyde phosphate dehydrogenase, diaphorase, and an electron mediator; and measuring a current value in said measurement system, wherein said current value indicates the concentration of the inorganic phosphoric acid in said sample, and the inorganic phosphoric acid is detected within 100 seconds after subjecting said sample to the measurement system.

2. (Original) The method of detecting an inorganic phosphoric acid according to claim 1 wherein said electron mediator is at least one selected from the group consisting of a ferricyanide, 1,2-naphthoquinone-4-sulfonate, 2,6-dichlorophenol indophenol, dimethylbenzoquinone, 1-methoxy-5-methylphenazinium sulfate, methylene blue, gallocyanine, thionine, phenazine methosulfate, and Meldola Blue.

3. (Cancelled).

4. (Original) The method of detecting an inorganic phosphoric acid according to claim 1 wherein said measurement system further comprises adenosine diphosphate and

phosphoglycerate kinase.

5. (Currently amended) A method of detecting a pyrophosphate which comprises:
converting the pyrophosphate in a sample into an inorganic phosphoric acid;
subjecting said sample to a measurement system including glyceraldehyde-3-phosphate,
oxidized nicotinamide adenine dinucleotide or oxidized nicotinamide adenine dinucleotide
phosphate, glyceraldehyde phosphate dehydrogenase, diaphorase, and an electron mediator; and
measuring a current value in said measurement system, wherein said current value
indicates the concentration of the pyrophosphate in said sample, and the pyrophosphate is
detected within 100 seconds after subjecting said sample to the measurement system.

6. (Original) The method of detecting a pyrophosphate according to claim 5 wherein
said conversion of the pyrophosphate into an inorganic phosphoric acid is conducted using
pyrophosphatase.

7. (Currently amended) A method of detecting a nucleic acid which comprises:
subjecting a sample to a reaction system including a DNA probe having a complementary
sequence to the sequence of said nucleic acid, DNA polymerase and a deoxynucleotide, and
allowing extension of said DNA probe whereby a pyrophosphate produced concurrent with the
extension reaction of said DNA probe;
converting the pyrophosphate produced in the sample into an inorganic phosphoric acid;

subjecting said sample to a measurement system including glyceraldehyde-3-phosphate, oxidized nicotinamide adenine dinucleotide or oxidized nicotinamide adenine dinucleotide phosphate, glyceraldehyde phosphate dehydrogenase, diaphorase, and an electron mediator; and measuring a current value in said measurement system, wherein said current value indicates the concentration of the nucleic acid having a specified sequence in said sample, and the nucleic acid is detected within 100 seconds after subjecting said sample to the measurement system.

8. (Original) The method of detecting a nucleic acid according to claim 7 wherein said extension reaction of the DNA probe is a PCR reaction.

9. (Currently amended) A method of typing a SNP sequence of a DNA which comprises:

subjecting a sample to a reaction system including a DNA probe having a complementary sequence to the sequence of said DNA and having a SNP site, DNA polymerase and a deoxynucleotide, and allowing extension of said DNA probe whereby a pyrophosphate produced concurrent with the extension reaction of said DNA probe;

converting the pyrophosphate produced in the sample into an inorganic phosphoric acid;

subjecting said sample to a measurement system including glyceraldehyde-3-phosphate, oxidized nicotinamide adenine dinucleotide or oxidized nicotinamide adenine dinucleotide phosphate, glyceraldehyde phosphate dehydrogenase, diaphorase, and an electron mediator; and

measuring a current value in said measurement system, wherein said current value indicates the presence of the DNA having a specified sequence in said sample, and the SNP

sequence of the DNA is typed within 100 seconds after subjecting said sample to the measurement system.

10. (Original) The method of typing a SNP sequence of a DNA according to claim 9 wherein said extension reaction of the DNA probe is a PCR reaction.